

REMARKS

Claims 1, 2, 11, and 24 have been amended for clarity, and not in response to the prior art as cited by the Examiner. Claims 27-30 Have been added. Accordingly, claims 1- 30 are pending in this application.

Pursuant to 37 CFR 1.21(c)(1), a marked up version of the claims is submitted herewith showing the changes between the previous version of the claims, and the amended claims. The amended claims include the same changes as are indicated in the marked up copy. Applicant respectfully requests that the amended claims be entered in this case. Reconsideration on the basis of the above amendments and remarks below is kindly requested.

Paragraphs of the specification have been amended for clarity. No new matter has been added. Pursuant to 37 CFR 1.21, a marked up version of the paragraphs is submitted herewith showing the changes between the original version, and the amended version. The amended version includes the same changes as are indicated in the marked up copy.

In view of the foregoing amendments and remarks, consideration and allowance of this application is respectfully requested. If the Examiner believes that a telephone conference with applicant's attorney might expedite prosecution of this application, the Examiner is invited to call at the telephone number indicated below.

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Enclosures:

Marked-up Copy of the Claims
Marked-up copies of paragraphs

Mark-ups of the paragraph starting at Page 4, line 1:

A channel 129, as shown in the embodiment of Fig. 3, is formed as a hole or fluid feed slot through the capping layer 104, and the rest of the thin film stack. The channel 129 fluidically couples the firing chamber 130 and the slot 126, such that fluid flows through the slot 126 and into the firing chamber 130 via channel 129. In one embodiment, entrances to the channels 129 are substantially rectangular and substantially parallel to each other along the capping layer 104, as shown in Fig. 2A. In one embodiment, each channel 129 leads from the slotted substrate to the corresponding firing chamber 130 through the thin film stack.

Mark-ups of the paragraph starting at Page 4, line 15:

In one embodiment shown in Fig. 3, the slot 126 is formed after the thin film stack is deposited on the front side of the substrate. After the thin [films] film layers 104, 107, 108, 110, 111 are formed, [a front side protection (or plug) layer 106 is deposited in the channel 129. The layer 112 is then formed thereover. Then] then the slot 126 is etched, as shown in Fig. 3. After the slot is formed, the layer 112 is then formed thereover.

In Fig. 2B, a front side protection (or plug) layer 106 is deposited in the channel 129, and then the layer 112 is deposited. The substrate is then etched to form the slot. After the slot is formed, the layer 106 is removed from the channel 129 with a BOE (buffered oxide etch), as described in more detail below. In one particular embodiment, no additional etching of the slot is performed after the plug is removed.

1. (Amended) A method of manufacturing a slotted substrate comprising:

forming a masking layer over a front side of a substrate;
patterning and etching the masking layer to form a hole therethrough;
depositing a first layer over the masking layer and in the hole;
patterning and etching the first layer to form a plug in the hole; and
[continuously] etching a back side of the substrate until a bottom surface of the plug is substantially exposed and a slot in the substrate is substantially formed.

2. (Amended) The method of claim 1 further comprising [immediately] etching to remove the plug after etching the back side of the substrate to form the slot.

11. (Amended) A method of manufacturing a fluid ejection device comprising:

forming a masking layer over a first surface of a substrate;
patterning and etching the masking layer to form a hole therethrough;
depositing a first layer over the masking layer and in the hole;
patterning and etching the first layer to form a plug in the hole; and
[continuously] etching a second surface opposite the first surface of the substrate until a bottom surface of the plug is substantially exposed and a slot in the substrate is substantially formed.

24. (Amended) A process comprising:

forming a first masking layer over a front side of a silicon substrate;

patterning and etching the first masking layer to form a hole therethrough;

depositing a front side protection layer over the first masking layer and in the hole;

patterning and etching the front side protection layer over the hole;

forming a second masking layer over the back side of the substrate;

patterning and etching the second masking layer;

[continuously] etching a back side of the substrate with an alkaline etchant until a bottom surface of the front side protection layer in the hole is substantially exposed and a slot in the substrate is substantially formed; and

etching with a buffered oxide etch to remove the front side protection layer after etching the back side of the substrate to form the slot through the substrate.